

ITX02-250C BROADBAND MMDS TRANSMITTER (250Watts)



- **Broadband Indoor Transmitter with 31 Channel Analog or 150 Digital TV Program Capability**
- **24 Kilometer Radius with 31 Channel Load**
- **Compact Design, Small size and Weight**
- **Cost Effective for Small Urban and Rural Areas**

PRODUCT APPLICATION:

The ITX02-250C is a broadband MMDS transmitter with a capacity of up to 31 television channels or 150 digital channels (with 64QAM, 256 QAM or OFDM modulation). The transmitter incorporates traditional Cable AML reliability and design features including advanced linearization techniques.

The ITX02-250C is designed to provide cost-effective coverage over a wide area. With an omnidirectional transmit antenna, it can cover an area of approximately 24 kilometer radius when transmitting 150 digital TV programs or 31 analog channels, or 35 Km radius with 80 digital TV programs or 15 analog channels.

The input is a broadband signal in the 222 to 420 MHz frequency range. The output is in the 2.5 to 2.7 GHz range. As in all broadband transmitters, the output power depends on the number of channels.

For example, with 12 channels or 80 digital TV programs the transmitter delivers 1 Watt per channel with a C/CTB of better than 50 dB (measured with CW carriers), or approximately 2 Watts per channel peak power.

The transmitter is very easy to install and operate. Its compact design requires only 12.25 inches (31.2 cm) height in a standard 19 inch (48.3 cm) wide rack or cabinet. It is designed to operate indoors without air conditioning requirements.

The transmitter features a modular design for ease of maintenance and service. The key modules are the 12 VDC power supply, driver, up converter, power amplifier, and diagnostic circuits.

An option offered with the transmitter is output monitoring at VHF frequencies.

Product Specification¹



Transmitter																									
Input Frequency ² :	222 to 420 MHz																								
Nominal Input Level for 12 TV:	+20 dBmV (-29 dBm)																								
Output Frequency ² :	2.5 to 2.7 GHz																								
Output Level for 50 dB C/CTB: (measured with CW carriers) ³	<table border="1"> <thead> <tr> <th>Channels</th> <th>Average Power dBm/Channel</th> <th>Peak Power dBm/Channel</th> <th>C/N (dB)</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>31.5</td> <td>34.0</td> <td>64.5</td> </tr> <tr> <td>12</td> <td>30.0</td> <td>32.5</td> <td>63.0</td> </tr> <tr> <td>18</td> <td>28.0</td> <td>30.5</td> <td>61.0</td> </tr> <tr> <td>24</td> <td>26.0</td> <td>28.5</td> <td>59.0</td> </tr> <tr> <td>30</td> <td>25.0</td> <td>27.5</td> <td>58.0</td> </tr> </tbody> </table>	Channels	Average Power dBm/Channel	Peak Power dBm/Channel	C/N (dB)	9	31.5	34.0	64.5	12	30.0	32.5	63.0	18	28.0	30.5	61.0	24	26.0	28.5	59.0	30	25.0	27.5	58.0
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Local Oscillator Frequency ²	2278 MHz																								
Frequency Response	±1 dB																								
Frequency Stability	0.0005%																								
Input Return Loss:	15 dB																								
Input Connector:	Type "F"																								
Output Return Loss:	18 dB																								
Output Connector:	Type "N"																								
Temperature Range:	60° to 100°F (16° to 38°C)																								
Humidity:	95% max.																								
Primary Power:	120/240 VAC, 50/60Hz (per customer specification)																								
Power Consumption:	840 VA RMS																								
Mounting:	EIA Standard Relay Rack																								
Weight:	58 lb. (26.3 kg)																								
Dimensions:	19" rack width x 12.5" H x 24" D (48.3cm W x 31.8cm H x 61cm D)																								

¹ Specifications subject to change without prior notice.

² Other frequencies available.

³ The C/CTB with modulated carriers are approximately 6 dB better than with CW carriers.